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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/604,918

08/26/2003

Chuan-Pei Yu

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02/03/2005

NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC)

P.O. BOX 506

MERRIFIELD, VA 22116

EXAMINER

CHOWDHURY, TARIFUR RASHID

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/604,918

Applicant(s)

YU ET AL.

Examiner

Tarifur R Chowdhury

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 05/27/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Specification*

2. The disclosure is objected to because of the following informalities:

In Page 2, line 17, "16" should be changed to --56--.

Appropriate correction is required.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Objections*

3. Claim 1 is objected to because of the following informalities: In claim 1, line 11, "to scattering" should be changed to --to scatter--. Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Junichi et al., (Junichi), JP 10-002813 (provided by the applicant).**

6. Junichi discloses and shows in Fig. 1, a backlight unit, comprising:

- a plurality of fluorescent lamp tubes (6) arranged in parallel within a housing (8);

Art Unit: 2871

- a plurality of reflection plates (7) disposed underneath the plurality of lamp tubes and each of the reflection plates being integrated with corresponding lamp tubes to constitute an independent lamp module cartridge, which is removable from one side of the housing; and
- a diffusing plate (5) disposed over the plurality of lamp tubes and fixed on the housing, the diffusing plate being used to scatter the light generated by the plurality of lamp tubes.

Accordingly, claims 1 and 2 are anticipated.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**9. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of Junichi et al., (Junichi), JP 11-002813 (cited by the applicant).**

10. The AAPA described in the instant application discloses (pages 1-3) and shows in Fig. 1, a backlight unit, comprising:

- a plurality of fluorescent lamp tubes (14) arranged in parallel within a housing (54);
- a reflection plate (18) disposed underneath the plurality of lamp tubes; and
- a diffusing plate (56) disposed over the plurality of lamp tubes and fixed on the housing, the diffusing plate being used to scatter the light generated by the plurality of lamp tubes.

The AAPA differs from the claimed invention because in the AAPA a reflection plate is disposed underneath the lamp tubes instead of plurality of reflection plates wherein each of the reflection plate is integrated with corresponding lamp tubes to constitute an independent lamp module cartridge and which is removable from one side of the housing.

Junichi discloses a backlight unit wherein a plurality of reflection plates are (7) are disposed underneath each of the plurality of lamp tubes (6) and each of the reflection plates being integrated with corresponding lamp tubes to constitute an independent lamp module cartridge, which is removable from one side of the housing (8) (Figs. 1-4). Junichi further discloses that such an arrangement is advantageous

Art Unit: 2871

since it provides easy attachment and detachment of the lamp tubes from the frame body of the backlight (abstract).

Junichi is evidence that ordinary workers in the art would find a reason, suggestion or motivation to dispose plurality of reflection plates underneath each of the plurality of lamp tubes such that each of the reflection plates is integrated with corresponding lamp tubes to constitute an independent lamp module cartridge, which is removable from one side of the housing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the backlight unit of the AAPA by disposing plurality of reflection plates underneath each of the plurality of lamp tubes such that each of the reflection plates is integrated with corresponding lamp tubes to constitute an independent lamp module cartridge, which is removable from one side of the housing for advantages such as easy attachment and detachment of the lamp tubes, as per the teachings of Junichi.

Accordingly, claims 1 and 2 would have been obvious.

As to claim 3, the AAPA described in the instant application also discloses and shows in Fig. 1, that the backlight unit further comprising an optic film (22) disposed on the diffusing plate (56), and the optic film comprising a diffusing sheet (20), a prism sheet (not shown) and a polarization transmission/reflection sheet (not shown).

**11. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Junichi in view of Yoshii et al., (Yoshii), USPAT 6,147,724.**

Art Unit: 2871

12. Junichi differs from the claimed invention because he does not explicitly disclose the limitations such as: (1) the lamp tubes having one low-voltage end connected to a first plastic capping piece that is embedded on a first sidewall of the housing and one high-voltage end connected to a second plastic capping piece that is embedded on a second sidewall opposite to the first sidewall of the housing; and (2) a first connector is installed at a rear side of the first plastic capping piece and has a terminal therein to electrically connect to the low-voltage end of the lamp tube.

Yoshii discloses a backlight unit that includes a fluorescent lamp tube. He further discloses (col. 18, line 4 - col. 19, line 12) and shows in Figs. 1A-1C 19A-19C, 20A-20C, 21A-21E and 22A-22C, that the lamp tube (LP) has one low-voltage end (E2) connected to a first plastic capping piece that is embedded on a first sidewall of the housing and one high-voltage end (E1) connected to a second plastic capping piece that is embedded on a second sidewall opposite to the first sidewall of the housing; and (2) a first connector (LPSOL) is installed at a rear side of the first plastic capping piece and has a terminal (TRM2) therein to electrically connect to the low-voltage end of the lamp tube. Yoshii also discloses that when a voltage is applied to the E1 and E2, a discharge occurs in the tube causing the fluorescent tube to emit light and the plastic capping protect the fluorescent tube against vibrations and impacts and the terminal connected to the low-voltage end reduce power consumption.

Yoshii is evidence that ordinary workers in the art would find a reason, suggestion or motivation to arrange a lamp tube as claimed.

Art Unit: 2871

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the backlight unit of Junichi by connecting one low-voltage end to a first plastic capping piece that is embedded on a first sidewall of the housing and connecting one high-voltage end to a second plastic capping piece that is embedded on a second sidewall opposite to the first sidewall of the housing and installing a first connector having a terminal at a rear side of the first plastic capping piece to electrically connect to the low-voltage end of the lamp tube for advantages such as causing the lamp to emit light and protect the lamp against vibrations and impacts and reduce power consumption, as taught by Yoshii.

Accordingly, claims 4-7 would have been obvious.

***Allowable Subject Matter***

13. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.




Art Unit: 2871

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC  
January 31, 2005



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER